CLEMSON
UNIVERSITY

April 18, 2017

Ms. Tawanda S. Maignan
Emergency Response Team Leader
Minor Use and Emergency Response Branch
Registration Division
US EPA Office of Pesticide Programs
1200 Pennsylvania Ave., NW
Washington, DC 20460

Dear Ms. Maignan,

The Department of Pesticide Regulation, Regulatory and Public Service Programs at Clemson University, again supports a Section 18 Emergency Exemption for the use of Transform WG (50% sulfoxaflor) to control Sugarcane Aphid, *Melanaphis sacchari*, on grain sorghum in South Carolina during the 2019 season. Enclosed, please find a letter from Clemson University Extension requesting this use, along with a letter of support from Dow AgroSciences.

Dr. Francis Reay-Jones, Clemson University Extension Research Scientist, has indicated that the presence of *Melanaphis sacchari*, an invasive sugarcane aphid, in South Carolina constitutes an emergency situation for the state's grain sorghum crop again this year. The requested period of use for this product is from May 15, 2018 until November 30, 2018. This product is needed state-wide this year, so its proposed use will be in all 46 counties in SC. The estimated treated acreage for 2019 is 7,114 acres.

It is anticipated that the use of this product in established sorghum fields under Section 18 Emergency Exemption will have no adverse effects on endangered or threatened plant and animal species in South Carolina during the proposed period of application, as it has had no adverse effects in past years of use within this state. There were no adverse effects reported to the Cooperative Extension Service, or to the Department of Pesticide Regulation resulting from the use of this product on 4,992 acres of sorghum in SC during the 2018 season.

If you should have any further questions regarding this request or need any other supporting information, please contact me. Please send all correspondence related to this request to Tim Drake, Assistant Director, Department of Pesticide Regulation, Clemson University, 511 Westinghouse Road Pendleton, SC 29670. Phone (864) 316-7503, tdrake@clemson.edu .

Sincerely,

Tim M. Drake Jr., Ph.D.
State Entomologist
Assistant Director
Department of Pesticide Regulation

DEPARTMENT OF PESTICIDE REGULATION
511 Westinghouse Road Pendleton, SC 29670 864.646.2150 FAX 864.646.2179
Regulatory & Public Service Programs Public Service Activities

CLEMSON
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Ms. Tawanda S. Maignan
Emergency Response Team Leader
Minor Use and Emergency Response Branch
Registration Division
US EPA Office of Pesticide Programs
1200 Pennsylvania Ave., NW
Washington, DC 20460

April 18, 2019

Dear Ms. Maignan,

Under the Section 18 Emergency Exemption for the use of Transform on Sorghum, 312 pounds of formulated product were used in South Carolina to treat 4,992 acres of sorghum. There were no adverse effects reported to the Cooperative Extension Service, or to the Department of Pesticide Regulation resulting from the use of this product in SC during the 2018 season.

Sincerely,

Tim M. Drake Jr., Ph.D.
State Entomologist
Assistant Director
Department of Pesticide Regulation

DEPARTMENT OF PESTICIDE REGULATION
511 Westinghouse Road Pendleton, SC 29670 864.646.2150 FAX 864.646.2179

CLEMSON
UNIVERSITY

29 March, 2019

Dr. Tim Drake
State Programs Manager
Department of Pesticide Regulation
Clemson University
511 Westinghouse Road

Dear Dr. Drake:

PEE DEE RESEARCH AND EDUCATION CENTER

2200 Pocket Road
Florence, SC
29506

P (843) 662-3526
F (843) 662-2112

I am submitting a Section 18 Emergency Exemption request for use of Transform WG on sorghum for the control of the sugarcane aphid (*Melanaphis sacchari*) in South Carolina for the 2019 growing season. This is an invasive species that was first found on sugarcane in FL in 1977 and in LA in 1999. The insect switched host in 2013 and was found on grain and forage sorghum in Texas. This new strain or biotype was also found in MS also in 2013, and it rapidly spread in 2014 to Arkansas, Tennessee, Alabama, and Georgia. In October 2014, I was alerted to aphids found infesting grain sorghum in Orangeburg County, SC, and aphids were then found in Aiken, Barnwell and Darlington Counties on grain sorghum. Specimens collected in Orangeburg County, SC were sent to a taxonomist at the Florida Department of Agriculture who confirmed the species as *Melanaphis sacchari*. From 2015-2018, sugarcane aphids were first detected in South Carolina in June, and then quickly spread to commercial sorghum fields.

While infestations in October 2014 occurred too late in the growing season in South Carolina to cause major yield loss in sorghum, sugarcane aphid infestations from 2015-2018 caused major yield losses, with complete crop failure in some cases. Untreated grain sorghum plots at the Clemson University Pee Dee REC in Florence in 2016 suffered yield reduction up to 100% due to sugarcane aphid feeding. I have visited a number of commercial fields in South Carolina that had major infestations of sugarcane aphids which required one or more applications of insecticide to prevent yield loss. We expect the insect to continue to cause damage to sorghum in South Carolina in 2019. In 2018, the USDA Farm Survey estimated in South Carolina 7,114 acres of sorghum.

Labeled products are flupyradifurone (Sivanto Prime), chlorpyrifos and dimethoate. Dimethoate only provides fair control (< 50%) and chlorpyrifos had limited residual activity beyond 7 days in our trials in 2015. In addition, the pre-harvest intervals for chlorpyrifos is 30 days for the 1 pint rate and 60 days for rates above one pint. Late infestations of sugarcane aphid can occur and effective products with shorter pre-harvest intervals are needed. Sivanto Prime has a full label and provides very good control of sugarcane aphids and is currently the only labeled product that our growers can rely on with good activity. Transform WG (sulfoxaflor) also provided good control of sugarcane aphid in our trials. Transform WG received a section 18 emergency exemption approval in 2015-2018 in South Carolina, as well as in many other states. With a 14-day pre-harvest interval for grain and 7-day pre-harvest interval for silage and forage, the Transform label provided a good tool for managing the sugarcane aphid close to harvest.

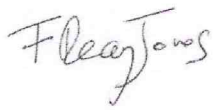
A Section 18 Emergency Exemption label for Transform WG on sorghum would provide growers with two products (with Sivanto Prime) that provide good control of sugarcane aphids. Sivanto Prime provides very good control of sugarcane aphid, so the value and need for a section 18 for

Transform has three advantages: (1) even though Sivanto Prime (IRAC 4D) and Transform (IRAC 4C) have fairly similar modes of action, these are still in different sub-groups, so there is potentially value for resistance management by rotating among the 2 insecticides, (2) Transform has a shorter pre-harvest interval (14 days) compared to Sivanto Prime (21 days), so Transform can be a better fit in the system when late season infestations occur (aphids can cause major issues with harvest equipment, so this is an issue), and (3) there were supply issues in 2015 with Sivanto, so having two labeled products available for our growers would help, particularly with the speed at which infestations can develop and the need to quickly use control measures under such circumstances.

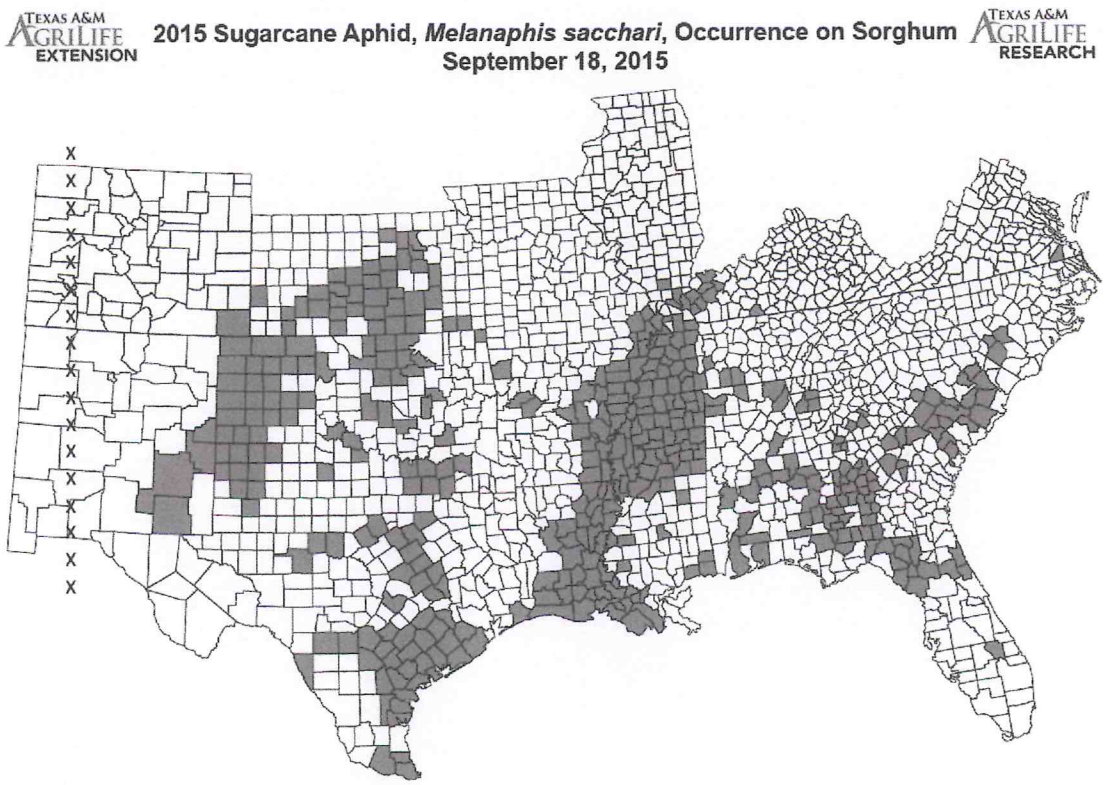
Transform was already used prior to the 2015 Section 18 Emergency Exemption label on cotton and vegetable crops in the same SC Counties where grain sorghum is grown. To my knowledge, no endangered or threatened species were harmed or impacted by the use of Transform in sorghum in 2015, 2016, 2017, and 2018 in South Carolina.

If I may respond to additional questions you have, please contact me.

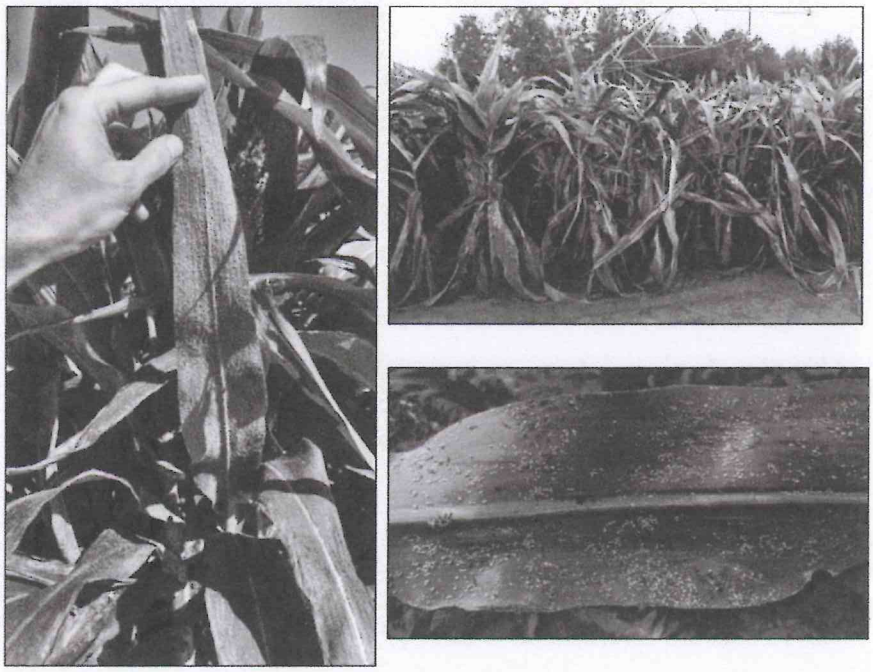
Sincerely,



Francis P. F. Reay-Jones, Ph.D.
Professor of Entomology
Clemson University
Department of Plant and Environmental Sciences
Pee Dee Research and Education Center
2200 Pocket Road
Florence, SC 29506-9727
E-mail: freayjo@clemson.edu
Office: 843-519-0480



Distribution map of sugarcane aphid on grain sorghum
(Michael Brewer and Robert Bowling, Texas A&M University)



Infestations of sugarcane aphid in Florence and Allendale Counties, SC, July-August 2015 (F. Reay-Jones)

Dow AgroSciences

Dow AgroSciences LLC
9330 Zionsvile Road
Indianapolis, IN 46163

dowagro.com

February 19, 2019

Dr. Francis P. F. Reay-Jones
Associate Professor of Entomology
Clemson University
Department of Agricultural and Environmental Sciences
Pee Dee Research and Education Center
2200 Pocket Road
Florence, SC 29506-9727

Re: Support letter for Transform™ WG Section 18 on sorghum

Dear Dr. Reay-Jones,

Per your request, this letter is to confirm that Dow AgroSciences supports the pursuit of a Section 18 emergency exemption for Transform WG to control sugarcane aphid in sorghum in the state of South Carolina. Transform WG has provided excellent efficacy against sugarcane aphid in previous use under Section 18 exemptions, with no negative impacts on non-target insects. It represents a new class of chemistry with a novel mode of action, and controls pests resistant to other classes of chemistry.
If you have questions, please do not hesitate to call me.

Sincerely,

Jamey Thomas, Ph.D.
US Regulatory Manager
Dow AgroSciences

cc: Tami Jones-Jefferson, DAS

Dow AgroSciences

Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268-1054 USA

Transform® WG

EPA Reg. No: 62719-625

For Control of Sugarcane Aphid (*Melanaphis sacchari*) in Sorghum

Section 18 Emergency Exemption

File symbol: XXXXXX

FOR DISTRIBUTION AND USE ONLY IN SOUTH CAROLINA UNDER SECTION 18 EMERGENCY EXEMPTION

This Section 18 Emergency Exemption is effective XXXXXX and expires XXXXXX.

- This labeling must be in the possession of the user at the time of application.
- It is in violation of federal law to use this product in a manner inconsistent with its labeling.
- Read the label affixed to the container for Transform® WG insecticide before applying. Carefully follow all precautionary statements and applicable use directions.
- Any adverse effects resulting from the use of Transform WG under this emergency exemption must be immediately reported to the South Carolina Department of Agriculture

Environmental Hazards Statement: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry. Risks to managed and native pollinators from contact with pesticide spray or residues can be minimized when applications are made before 7:00 a.m. or after 7:00 p.m. local time or when the temperature is below 55 degrees Fahrenheit (°F) at the site of application.

Directions for Use

Pests and Application Rates:

Pests	Transform WG (oz/acre)	Comments
Sugarcane aphid	0.75 – 1.5 (0.023 – 0.047 lb ai/acre)	Use a higher rate in the rate range for heavy pest populations.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Application Method: Control of sugarcane aphid may be contingent on thorough coverage to the crop. Use sufficient water to get full coverage of the canopy. It is recommended that a minimum of 5 gallons of water be applied by air.

Spray Drift Management: Applications are prohibited above wind speeds of 10 miles per hour (mph). Applications must be made with medium to coarse spray nozzles (i.e., with median droplet size of 341 µm or greater).

Restrictions:

- **Preharvest Interval:** Do not apply within 14 days of grain or straw harvest or within 7 days of grazing, or forage, fodder, or hay harvest.
- A restricted entry interval (REI) of 24 hours must be observed.
- Do not make more than two applications per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.
- Do not apply more than a total of 3.0 oz of Transform WG (0.09 lb ai of sulfoxaflor) per acre per year.
- Do not apply product ≤ 3 days pre-bloom or until after seed set.

R396-232
Approved: __/__/__
Replaces R396-201